In the Specification:

Please, amend the Specification as follows:

Page 1, line 4, change ~by light scattered~ to -- by light or laser beam--;
line 9, delete ~using light scattering~;
line 17, change ~'Active'~ to --Active--.

Page 4, line 8, change ~especially~ to --specially--;
line 15, change ~contained in the~ to --characterized by--.

Page 5, line 3, after ~(Microns).~ insert

--Other known devices use a fiber optic means for scattered or diffracted light collection (see, for example, U.S. Patents No.4,595,291, No. 5,325,169, No.5,619,333 and No.5,731,875).

Some known devices (for example, by U.S. Patent No.5,731,875) use a plurality of light emitting lasers intended for the power decreasing, that provides the elimination of the laser heat-sink, but, it requires to use a plurality of fiber optic stands and the optical element(s) for the focusing of a plurality of light beams.--

line 7, after ~devices.~ insert

--Also the devices, based on scattered light collection and some other detection methods (for example, by light splitting), use a different variations of the analog comparison method for the particle counting and measuring. Such methods can be illustrated, for example, by U.S. Patent No.4,798,465, wherein is shown the particle size detection device, using one of the particle measuring comparison method variation. The signals from detectors via the amplifiers follow to the comparators, which are connected to the reference voltage means. The amplified detected signal is compared with the predetermined reference voltage for the particle size qualifying.

Such analog methods cannot provide a sufficiently high sensitivity related to the increasing environmental requirements, because of the non-precise analog method of comparison.--.

Page 6, lines 7, 9, 11, 13, 14 delete ~devices~;
delete line 16 in its entirety and insert therefor

-- device with the divided particle flow tubular means.--;
delete line 18 in its entirety and insert therefor

--device with non-divided particle flow tubular means.--.

Page 7, delete lines 1, 2 in their entirety;
line 3, change ~10~ to --9-- and delete ~of the second variant~ ;
line 5, change ~11~ to --10--;
line 6, change ~12~ to --11-- and after ~with~ insert --the--;
line 10, delete ~achieving~;
line 16, after ~signals~ insert --,-- and after ~means~ insert --,--;
line 17, change ~ processing of the signals~ to --signal processing-- and delete ~ display- ~;
line 18, change ~ing information.~ to --information displaying.-- and change ~amplitude or~ to --direct detection of the particles and--.

Page 8, delete lines 1-7 in their entirety and insert therefor

--By an improved method, the improved timing processing of the detected signals is provided by strobing of the digital form pulses, created from the appropriate amplified detected signals and having the different durations created by appropriate different size particles, intersecting the light beam.--;

line 13, change ~Figs.6, 7, 8~ to --Figs.6, 7--;
line 15, after ~tubular~ insert --(capillary)-- and change ~The~ to --For example, the-- and change ~particles, is~ to --particle passage, can be divided--;
line 16, change ~interrupted~ to --(interrupted)-- and after ~area~ insert --for the inlet particle flow tubular means and outlet particle flow tubular means--;
line 17 after ~has~ insert --a--.
Page 9, line 3, after ~is~ insert --by a multiplexed bus 25--;
line 4, after ~21~ insert --connected to each other by the multiplexed bus 25. The terminal means 21 can include at least one of a displaying means, an external control means (for example, a key board), a printing means, a compact disk means, a floppy disk means and an external interface means (all not shown).--;
delete lines 5-8 in their entirety;
line 9, change ~10~ to --9-- and change ~time method processing~ to --a timing processing--;
line 12, change ~11~ to --10-- and change ~timing diagram~ to --timing-diagram--;
line 13, change ~12~ to --11-- and change ~,~ to --.--;
line 14, change ~comprises~ to --This device comprises-- and after ~by~ insert --a-- and after ~optic~ insert -connecting--;
line 15, after ~is~ insert --electrically-- and after ~including~ insert --an analog-digital subsystem 14 and a control subsystem 13, comprising--;
line 16, after ~21.~ insert --The microprocessor subsystem 20 and the terminal means 21 are connected to each other and to an analog-digital subsystem 14 by the multiplexed bus 25. The terminal means 21 can include at least one of a displaying means, an external control means (for example, a key board), a printing means, a compact disk means, a floppy disk means and an external interface means (all not shown).--.
Page 10, line 3, change ~obstructs the light~ to --is an obstruction for the light in the direction--;
line 4, after ~4.~ insert --The bigger particle, the less light intensity on the light detection means 4. For other detecting principles (for example, for scattered light collection by lens or mirror collecting system), the light intensity on the light detection means (on the light detector) will be presented when the particles intersect the laser beam. The bigger particle, the higher intensity.--;
line 5, after ~signals~ insert --,-- and change ~, (see Fig.11a)~ to --(current signals),-- and after ~follow to~ insert --the amplifying means 15 of--;
line 6, after ~14~ insert --(Fig.9)-- and delete ~As shown on Figs.9,~;
delete lines 7, 8 in their entirety;
delete lines 9, 10 in their entirety and insert therefor
--An improved timing processing method provides the digital processing of the amplified detected signals (see Fig.10).--;
delete lines 11-16 in their entirety;
line 17, change ~10~ to --9-- and delete ~(Fig.11b)~;
line 18, after ~which~ insert --converses them to the voltage signal (Fig.10a), amplifies these voltage signals (Fig.10b) and-- and after ~digital~ insert --form-- and change ~(Fig.11c)~ to --snown on Fig.10c (the digital form pulses can be presented by digital code after an analog-digital converter - not shown).-- and delete ~from the analog signals of the~;

line 19, delete ~amplifying means 15.~ .

Page 11, line 1, after ~or~ insert --by--;

line 3, change ~Figs.9, 10` to --Fig.9--;

line 4, change ~time~ to --timing--;

line 5, change ~11c~ to --10c--;

line 6, change ~11d~ to --10d-- and after ~in~ insert --the microprocessor subsystem 20 of -- and change ~signals~ to --packages of strobe pulses-- and change ~11e~ to --10e--;

line 7, after ~τ_i~ insert --(an appropriate different quantity of strobe pulses)--;

line 8, after ~beam.~ insert --The quantity of the strobe pulses within the strobe pulse package contains information about particle size. The more strobe pulses within the strobe pulse package, the bigger particle size. The quantity of the identical strobe pulse packages (packages, having the same quantity of strobe pulses within) characterizes the quantity of the identical size particles.--;

line 9, change ~the sensitivity~ to --precision and--;

delete lines 1, 2 of the bottom in their entirety and insert therefor --The control system 13 also may include the self-diagnostic and calibration means (not shown), electrically connected to microprocessor subsystem 20 and to the analog-digital subsystem 14. The microprocessor subsystem 20 may also process, for example, the signals, containing the information about environmental temperature, humidity, velocity rate, etc.

Page 12, delete line 1 in its entirety;

line 2, change ~12~ to --11--;

line 3, change ~laser beam source)~ to --laser)--;

line 4, after ~optic~ insert --connecting--;

line 7, change ~effective method and device, which provides~ to --effective methods and devices, which provide--;

line 9, change ~of air~ to --of air, gas--;

line 11, change ~an improved~ to --of improved--;

line 17, change ~for improved amplitude~ to --for an improved timing--;

line 18, change ~(~ to --,--.

Page 13, delete lines 1,2 in their entirety;

line 3, change ~unfocused~ to --non-focused-- and after ~in the~ insert --some--;

line 4, delete ~)~;

line 6, after ~detector~ insert --and can not require a power light beam, as it is necessary for the scattered light detecting system--.

In the Claims:

Cancel Claims 2 and 3 in their entirety.

Cancel Claims 1, 4-17 and substitute new Claims 18-31, as follows:

18. A method for counting and measuring a particles illuminated by a light beam and including the steps of:

providing an input of said light beam into a light detecting system, including a chamber, inside which said light beam along a light beam axis intersects said particles along a particle flow axis in an area of a light detection means, which is placed on said light beam axis, and wherein said intersection of said light beam axis with said particle flow axis is occurred on said light beam axis between a light beam source and said light detection means;

detecting an obstructed light beam by said light detection means, and wherein said obstructed light beam has an appropriate intensity and an appropriate duration, determined by an appropriate size of an intersecting particle;

processing detected signals by a processing system.

19. The method of claim 18, wherein each of said detected signals has said appropriate duration, determined by said appropriate size of said intersecting particle.

20. A method for counting and measuring particles, providing a timing processing of detected signals, includes the steps of:

amplifying said detected signals;

conversing the amplified detected signals to digital form pulses with appropriate durations, each of which is determined by an appropriate particle size;

forming strobe pulse packages, strobing said digital form pulses by strobe pulses;

counting a quantity of said strobe pulses within each of said strobe pulse package;

selecting and sorting a plurality of strobe pulse packages by an identical quantity of said strobe pulses within each strobe pulse package of said plurality of said strobe pulse packages;

counting a quantity of an identical strobe pulse packages.

21. The method of claim 20, wherein said quantity of said strobe pulses within said each strobe pulse package contains an information about said appropriate particle size.

22. The method of claim 20, wherein said quantity of said identical strobe pulse packages contains an information about quantity of the identical size particles.

23. A device for counting and measuring a particles includes:

a light detecting system, comprising a chamber, a light beam, a particle flow, a tubular particle flow means and a light detection means, wherein an axis of said particle flow intersects an axis of said light beam in an area of said light detection means, which is placed on said light beam axis, and wherein an intersection of said axis of said light beam with said axis of said particle flow is occurred on said light beam axis between a light beam source and said light detection means;

a processing system, comprising an analog-digital subsystem and a control subsystem.

24. The device of claim 23, wherein said analog-digital subsystem comprises an amplifying means and a pulse forming means, and wherein said light detection means is through said amplifying means connected to said pulse forming means.

25. The device of claim 23, wherein said control subsystem comprises a microprocessor subsystem and a terminal means connected to each other by a multiplexed bus.